

passed through an in-line filter in the blood component collection flow channel to remove undesired materials from the blood component before entering the blood component collection container.

31. A method according to claim 30
wherein the filter removes leukocytes.

32. A method according to claim 29
further including operating the pump station in a blood component return mode, during which the pump station is operated to convey at least some of the blood component in the blood processing flow channel into the donor flow channel for return to the donor.

33 (Once amended). A method according to claim 29
further including operating the pump station during the blood component return mode to convey a processing fluid in the utility flow channel into the donor flow channel for mixing with the blood component returned to the donor.

34. A method according to claim 33
wherein the processing fluid includes saline.

36 (Once amended). A method according to claim 29
wherein the processing fluid includes a blood component additive.

37. A method according to claim 29
wherein the blood component comprises red blood cells.

38. A method according to claim 29
wherein the blood component comprises plasma.

39. A method according to claim 29
wherein the pump station comprises first and second fluid pressure actuated pump stations, and a fluid pressure actuator operating to selectively apply fluid pressure pump strokes in tandem to the first and second pump stations to convey fluid from a source to a destination,

wherein, during at least one of the multiple modes, operation of the pump station is switched between a first flow state, in which the pump strokes draw a fluid volume into the first pump station from the source and expel a fluid volume from the second pump station to the destination, and a second flow state, in which the pump strokes draw a fluid volume into the second pump station from the source and expel a fluid volume from the first pump station to the destination, the control function operating to synchronize the pump strokes so that fluid flow from the source is essentially continuous while fluid flow to the destination is pulsatile.

40 (Once amended). A red blood cell processing method comprising the steps of
coupling a multi-function pump station to a donor flow channel to convey fluid to and